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EXAMINER	
PEREZ GUTIERREZ, RAFAEL	
ART UNIT	**PAPER NUMBER**
2686	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/926,434	Yamamoto	
	Examiner	Art Unit	
	Rafael Perez-Gutierrez	2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 June 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *24-62* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *24-62* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3/20/2002*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This Action is in response to Applicant's amendment filed on June 14, 2005. **Claims 24-62** are now pending in the present application. **This Action is made FINAL.**

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office Action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. **Claims 24-28, 30, 32, 33, 39, and 43** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Chennakeshu et al. (U.S. Patent # 6,542,758 B1)** in view of **Raith (U.S. Patent # 6,493,550 B1)**.

Consider **claim 24**, Chennakeshu et al. disclose a mobile communication terminal (A

mobile communication terminal such as a base unit or hand-held radiotelephone; *col. 3, line 66 thru col. 4, line 1; col. 2, lines 47-48*) connectable to a car mounted electronic device (A car mounted electronic device such as a control unit typically mounted on a vehicle, wherein interface modules provide communication between the mobile communication terminal and the car mounted electronic device; *col. 2, lines 30-31; col. 4, lines 60-62; Fig. 1; Fig. 2, item 32; Fig. 3, item 54*), the mobile communication terminal comprising:

a first interface for making radio communication with a mobile communication network (Wherein the mobile communication terminal or base unit comprises a transceiver capable of establishing radio communications with a mobile communication network through a station located outside of the vehicle; *col. 4, lines 1-3; Fig. 2, item 34; col. 6, lines 7-8; Figs. 5-6, item 103*);

a second interface for making radio communication with the car mounted electronic device (Wherein both the base unit and the control unit comprise transceivers/interface modules for establishing a radio communication link between them; *col. 4, lines 22-23 and 60-64; Fig. 2, item 32; Fig. 3, item 54*);

a connection control section for controlling connection to the car mounted electronic device (Wherein the control unit or car mounted electronic device comprise control logic for handling operations such as audio conversion, wherein said audio conversion comprise elements such as: a microphone for transmitting audio signals to the base unit subsequently conveying them to remote station outside of the vehicle; and a speaker for conveying audio signals received from a remote station outside of the vehicle to the control unit; *col. 4, lines 42-57; Fig. 3, items*

48 and 50);

wherein the connection control section starts a connection procedure with the car mounted electronic device by transmitting a signal that includes attribute information (e.g., identification data, type of mobile telephone) of the mobile communication terminal (column 8 line 64 - column 9 line 23) to the car mounted electronic device (control unit) when the car mounted electronic device (control unit) detects the presence of the mobile communication terminal (base unit or hand-held radiotelephone) (*col. 8, lines 54-57*); wherein the car mounted electronic device (control unit) establishes a wireless link between the mobile communication terminal and the car mounted electronic device (*col. 6, lines 31-42*) and consequently sets a hands-free communication mode when control passes to the car mounted electronic device or control unit (*col. 6, lines 55-65*).

Chennakeshu et al. further disclose that both the base unit and the control unit comprise transceivers/interface modules for establishing a radio communication link between them, said interface being a Bluetooth interface (*col. 4, lines 60-65; col. 6, lines 18-22*).

However, Chennakeshu et al et al. fail to clearly specify that the car mounted electronic device detects the presence of the mobile communication terminal by transmitting, within a radio area of the car mounted electronic device, a paging signal from the car mounted electronic device.

In the same field of endeavor, Raith clearly discloses that in Bluetooth systems, a fixed portion (such as a car mounted electronic device which is fixed within a car) acts as a master device and continuously transmits INQUIRE messages (paging signals) to determine the

presence of mobile devices (mobile communication terminal) within the vicinity (radio area) of the fixed portion, wherein the mobile devices provide a response signal when the INQUIRE message is received (column 7 lines 1-13).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to have Chennakeshu et al. vehicle mounted communication system to include a paging signal for establishing communications as taught by Raith for the purpose of allowing automatic link establishment between the car mounted electronic device and the mobile communication terminal.

Consider **claim 25**, and **as applied to claim 24 above**, Chennakeshu et al. in view of Raith disclose the aforementioned mobile communication terminal. In addition, Chennakeshu et al. disclose wherein the second interface is a Bluetooth circuit (Wherein both the base unit and the control unit comprise transceivers/interface modules for establishing a radio communication link between them, said interface being a Bluetooth interface; *col. 4, lines 60-65; col. 6, lines 18-22*).

Consider **claim 26**, and **as applied to claim 24 above**, Chennakeshu et al. in view of Raith disclose the aforementioned mobile communication terminal. In addition, Chennakeshu et al. disclose the mobile communication terminal further comprising an information transfer control section for transferring an incoming call to the car mounted electronic device via the second interface when the incoming call is received from the mobile communication network via the first interface (Wherein the control unit or car mounted electronic device comprise control logic for handling operations such as audio conversion, wherein said audio conversion comprise

elements such as: a microphone for transmitting audio signals to the base unit subsequently conveying them to remote station outside of the vehicle; and a speaker for conveying audio signals received from a remote station outside of the vehicle to the control unit; *col. 4, lines 42-57; Fig. 3, items 48 and 50*).

Consider **claim 27**, and **as applied to claim 26 above**, Chennakeshu et al. in view of Raith disclose the aforementioned mobile communication terminal. In addition, Chennakeshu et al. disclose the wherein the information transfer control section further transfers an outgoing call to the mobile communication network via the first interface when an outgoing call is received from the car mounted electronic device via the second interface (Wherein the control unit or car mounted electronic device comprise a microphone for transmitting audio signals to the base unit through a local-area transceiver conveying them to remote station outside of the vehicle through the base unit transceiver/item 34; *col. 4, lines 42-57; Fig. 2, item 32; Fig. 3, items 48, 50, and 54*).

Consider **claim 28**, and **as applied to claim 24 above**, Chennakeshu et al. in view of Raith disclose the aforementioned mobile communication terminal. In addition, Chennakeshu et al. disclose wherein the connection control section transmits an authentication code to the car mounted electronic device in the connection procedure via the second interface (The control unit or car mounted electronic device receiving the user ID or unique identification number from the base unit or mobile telephone; *col. 8, lines 18-64*).

Consider **claim 30**, Chennakeshu et al. disclose a car mounted electronic device connectable to a mobile communication terminal, the car mounted electronic device comprising:

a radio interface for making radio communication with the mobile communication terminal (Wherein both the base unit and the control unit comprise transceivers/interface modules for establishing a radio communication link between them; *col. 4, lines 22-23 and 60-64; Fig. 2, item 32; Fig. 3, item 54*); and

a connection control section for controlling connection to the mobile communication terminal (Wherein the control unit or car mounted electronic device comprise control logic for handling operations such as audio conversion, wherein said audio conversion comprise elements such as: a microphone for transmitting audio signals to the base unit subsequently conveying them to remote station outside of the vehicle; and a speaker for conveying audio signals received from a remote station outside of the vehicle to the control unit; *col. 4, lines 42-57; Fig. 3, items 48 and 50*);

wherein the connection control section of the car mounted electronic device (control unit) detects the presence of the mobile communication terminal (base unit or hand-held radiotelephone) (*col. 8, lines 54-57*), establishes a wireless link between the mobile communication terminal and the car mounted electronic device (i.e., by providing a response that includes attribute information (e.g., identification data, type of mobile telephone) of the mobile communication terminal (column 8 line 64 - column 9 line 23) from the mobile communication terminal, thereafter creating a two-way wireless link; *col. 6, lines 31-42; Fig. 4, item 68; Fig.6, item 118*), and sets a hands-free communication mode when control passes to the car mounted electronic device or control unit (*col. 6, lines 55-65*).

Chennakeshu et al. further disclose that both the base unit and the control unit comprise

transceivers/interface modules for establishing a radio communication link between them, said interface being a Bluetooth interface (*col. 4, lines 60-65; col. 6, lines 18-22*).

However, Chennakeshu et al et al. fail to clearly specify that the car mounted electronic device detects the presence of the mobile communication terminal by transmitting, within a radio area of the car mounted electronic device, a paging signal periodically from the car mounted electronic device.

In the same field of endeavor, Raith clearly discloses that in Bluetooth systems, a fixed portion (such as a car mounted electronic device which is fixed within a car) acts as a master device and continuously, for example every few seconds (periodically), transmits INQUIRE messages (paging signals) to determine the presence of mobile devices (mobile communication terminal) within the vicinity (radio area) of the fixed portion, wherein the mobile devices provide a response signal when the INQUIRE message is received (column 7 lines 1-13).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to have Chennakeshu et al. vehicle mounted communication system to include a paging signal for establishing communications as taught by Raith for the purpose of allowing automatic link establishment between the car mounted electronic device and the mobile communication terminal.

Consider **claim 32**, and **as applied to claim 30 above**, Chennakeshu et al. in view of Raith disclose the aforementioned car mounted electronic device. In addition, Chennakeshu et al. disclose the car mounted electronic device further comprising an information transfer control section for receiving an incoming call (Wherein the control unit or car mounted electronic device

comprise control logic for handling operations such as audio conversion, wherein said audio conversion comprise elements such as: a microphone for transmitting audio signals to the base unit subsequently conveying them to remote station outside of the vehicle; and a speaker for conveying audio signals received from a remote station outside of the vehicle to the control unit; *col. 4, lines 42-57; Fig. 3, items 48 and 50*), and transmitting an outgoing call (Wherein the control unit or car mounted electronic device comprise a microphone for transmitting audio signals to the base unit through a local-area transceiver conveying them to remote station outside of the vehicle through the base unit transceiver/item 34; *col. 4, lines 42-57; Fig. 2, item 32; Fig. 3, items 48, 50, and 54*).

Consider **claim 33**, and **as applied to claim 32 above**, Chennakeshu et al. in view of Raith disclose the aforementioned car mounted electronic device. In addition, Chennakeshu et al. disclose the car mounted electronic device further comprising a speaker (A speaker for conveying audio signals received from a remote station outside of the vehicle to the control unit; *col. 4, lines 42-57; Fig. 3, items 48 and 50*) for outputting a speech signal from the mobile communication terminal and a microphone for inputting speech of a user (Wherein the control unit or car mounted electronic device comprise a microphone for transmitting audio signals to the base unit through a local-area transceiver conveying them to remote station outside of the vehicle through the base unit transceiver/item 34; *col. 4, lines 42-57; Fig. 2, item 32; Fig. 3, items 48, 50, and 54*).

Consider **claim 39**, and **as applied to claim 30 above**, Chennakeshu et al. in view of Raith disclose the aforementioned car mounted electronic device. In addition, Chennakeshu et al.

disclose wherein the control section receives an authentication code from the mobile communication terminal via the radio interface and rejects the connection if the authentication code is not registered in the car mounted electronic device (The control unit or car mounted electronic device receiving the user ID or unique identification number from the base unit or mobile telephone, and denying access if the identification code is not matched; *col. 8, lines 18-64*).

Consider **claim 43**, Chennakeshu et al. disclose a system comprising:

a mobile communication terminal (A car mounted electronic device such as a control unit typically mounted on a vehicle, wherein interface modules provide communication between the mobile communication terminal and the car mounted electronic device; *col. 2, lines 30-31; col. 4, lines 60-62; Fig. 1; Fig. 2, item 32; Fig. 3, item 54*), and

a car mounted electronic device connectable to the mobile communication terminal (A mobile communication terminal such as a base unit or hand-held radiotelephone; *col. 3, line 66 thru col. 4, line 1; col. 2, lines 47-48*),

the mobile communication terminal including:

a first interface for making radio communication with a mobile communication network (Wherein the mobile communication terminal or base unit comprises a transceiver capable of establishing radio communications with a mobile communication network through a station located outside of the vehicle; *col. 4, lines 1-3; Fig. 2, item 34; col. 6, lines 7-8; Figs. 5-6, item 103*);

a second interface for making radio communication with the car mounted electronic

device (Wherein both the base unit and the control unit comprise transceivers/interface modules for establishing a radio communication link between them; *col. 4, lines 22-23 and 60-64; Fig. 2, item 32; Fig. 3, item 54*);

a first connection control section for controlling connection to the car mounted electronic device (Wherein the control unit or car mounted electronic device comprise control logic for handling operations such as audio conversion, wherein said audio conversion comprise elements such as: a microphone for transmitting audio signals to the base unit subsequently conveying them to remote station outside of the vehicle; and a speaker for conveying audio signals received from a remote station outside of the vehicle to the control unit; *col. 4, lines 42-57; Fig. 3, items 48 and 50*);

the car mounted electronic device including:

a third interface for making radio communication with the mobile communication terminal (Wherein both the base unit and the control unit comprise transceivers/interface modules for establishing a radio communication link between them; *col. 4, lines 22-23 and 60-64; Fig. 2, item 32; Fig. 3, item 54*); and

a second connection control section for controlling connection to the mobile communication terminal (Wherein the control unit or car mounted electronic device comprise control logic for handling operations such as audio conversion, wherein said audio conversion comprise elements such as: a microphone for transmitting audio signals to the base unit subsequently conveying them to remote station outside of the vehicle; and a speaker for conveying audio signals received from a remote station outside of the vehicle to the control unit;

col. 4, lines 42-57; Fig. 3, items 48 and 50);

wherein the first connection control section starts a connection procedure with the car mounted electronic device by transmitting a signal that includes attribute information (e.g., identification data, type of mobile telephone) of the mobile communication terminal (column 8 line 64 - column 9 line 23) to the car mounted electronic device (control unit) when the car mounted electronic device (control unit) detects the presence of the mobile communication terminal (base unit or hand-held radiotelephone) (*col. 8, lines 54-57*); wherein the car mounted electronic device (control unit) establishes a wireless link between the mobile communication terminal and the car mounted electronic device (*col. 6, lines 31-42*) and consequently sets a hands-free communication mode when control passes to the car mounted electronic device or control unit (*col. 6, lines 55-65*), and

the second connection control section of the car mounted electronic device (control unit) detects the presence of the mobile communication terminal (base unit or hand-held radiotelephone) (*col. 8, lines 54-57*), establishes a wireless link between the mobile communication terminal and the car mounted electronic device (i.e., by providing a response that includes attribute information (e.g., identification data, type of mobile telephone) of the mobile communication terminal (column 8 line 64 - column 9 line 23) from the mobile communication terminal, thereafter creating a two-way wireless link; *col. 6, lines 31-42; Fig. 4, item 68; Fig.6, item 118*), and sets a hands-free communication mode when control passes to the car mounted electronic device or control unit (*col. 6, lines 55-65*).

Chennakeshu et al. further disclose that both the base unit and the control unit comprise

transceivers/interface modules for establishing a radio communication link between them, said interface being a Bluetooth interface (*col. 4, lines 60-65; col. 6, lines 18-22*).

However, Chennakeshu et al et al. fail to clearly specify that the car mounted electronic device detects the presence of the mobile communication terminal by transmitting, within a radio area of the car mounted electronic device, a paging signal periodically from the car mounted electronic device.

In the same field of endeavor, Raith clearly discloses that in Bluetooth systems, a fixed portion (such as a car mounted electronic device which is fixed within a car) acts as a master device and continuously, for example every few seconds (periodically), transmits INQUIRE messages (paging signals) to determine the presence of mobile devices (mobile communication terminal) within the vicinity (radio area) of the fixed portion, wherein the mobile devices provide a response signal when the INQUIRE message is received (column 7 lines 1-13).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to have Chennakeshu et al. vehicle mounted communication system to include a paging signal for establishing communications as taught by Raith for the purpose of allowing automatic link establishment between the car mounted electronic device and the mobile communication terminal.

4. **Claims 29 and 31** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Chennakeshu et al. (U.S. Patent # 6,542,758 B1)** in view of **Raith (U.S. Patent # 6,493,550 B1), as applied to claims 24 and 30 above**, and further in view of **Chen et al. (U.S. Patent #**

5,751,719).

Consider **claim 29**, and **as applied to claim 24 above**, Chennakeshu et al. in view of Raith disclose the aforementioned mobile communication terminal. Chennakeshu et al. in view of Raith fail to clearly specify wherein the connection control section disconnects the connection with the car mounted electronic device and sets the communication mode in its own communication mode if no packet, which is periodically output from the car mounted electronic device for acknowledgement of the connection, is received for a predetermined time period.

In the same field of endeavor, Chen et al. disclose a method and system for controlling data transfer wherein data packets are transmitted periodically, and subsequently after receiving said data packets, an acknowledge is sent periodically. If no data packets are received disconnection or cessation of transmission ultimately occurs (*col. 9, line 51 thru col. 10, line 25*).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to have Chennakeshu et al. in view of Raith vehicle mounted communication system to monitor a communication session based on packet transmission as taught by Chen et al. for the purpose of avoiding the loss of data or voice through a damaged or non-operative communication link or session.

Consider **claim 31**, and **as applied to claim 30 above**, Chennakeshu et al. in view of Raith disclose the aforementioned car mounted electronic device. Chennakeshu et al. in view of Raith fail to clearly specify wherein the connection control section periodically transmits a packet, which is used by the mobile communication terminal to acknowledge the existence of the connection, via the radio interface.

In the same field of endeavor, Chen et al. further disclose a method and system for controlling data transfer wherein data packets are transmitted periodically, and subsequently after receiving said data packets, an acknowledge is sent periodically. If no data packets are received disconnection or cessation of transmission ultimately occurs (*col. 9, line 51 thru col. 10, line 25*).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to have Chennakeshu et al. in view of Raith vehicle mounted communication system to monitor a communication session based on packet transmission as taught by Chen et al. for the purpose of avoiding the loss of data or voice through a damaged or non-operative communication link or session.

5. **Claims 34-36** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Chennakeshu et al. (U.S. Patent # 6,542,758 B1)** in view of **Raith (U.S. Patent # 6,493,550 B1), as applied to claim 32 above**, and further in view of **Witkowski et al. (U.S. Patent Application Publication # 2002/0197955 A1)**.

Consider **claim 34** and **as applied to claim 32 above**, Chennakeshu et al. in view of Raith disclose the aforementioned car mounted electronic device. Chennakeshu et al. in view of Raith fail to clearly specify wherein the car mounted electronic device is a car audio device having a music playing function and a music is outputted by using the speaker.

In the same field of endeavor, Witkowski et al. disclose a system for communicating information between two or more wireless communication devices, wherein a vehicle comprises an audio system for outputting audio information transmitted from an electronic communication

device such as a cellular phone, a CD player or any other portable electronic equipment (*Page 4, Paragraphs 42-45*).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to have Chennakeshu et al. in view of Raith mobile communication terminal comprising means for establishing communication with a car mounted electronic device to include means for outputting audio information such as music as taught by Witkowski et al. for the purpose of communicating to a variety of portable communication devices when driving a motor vehicle.

Consider **claims 35 and 36**, and **as applied to claim 32 above**, Chennakeshu et al. in view of Raith disclose the aforementioned car mounted electronic device. Chennakeshu et al. in view of Raith fail to clearly specify wherein the car mounted electronic device is a car navigation device having a measuring function for measuring a vehicle position by using a GPS and a display for displaying map information (claim 35), wherein the car navigation device further comprises an audio reproduction section for reproducing an audio signal reproduced by the audio reproducing section outputted by using the speaker (claim 36).

In the same field of endeavor, Witkowski et al. disclose wherein the car mounted electronic device is a car navigation device having a measuring function for measuring a vehicle position by using a GPS and a display for displaying map information (A mobile communication terminal such as a cellular phone, and a car navigation device such as a GPS system device on-board a vehicle, wherein the cellular phone transmits information data over an RF wireless link to the on-board vehicle device, subsequently displaying said information on the vehicle's

display; *Pages 7-8, Paragraph 73*), wherein the car navigation device further comprises an audio reproduction section for reproducing an audio signal reproduced by the audio reproducing section outputted by using the speaker (Pages 7-8, Paragraph 73).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to have Chennakeshu et al. in view of Raith mobile communication terminal comprising means for establishing communication with a car mounted electronic device to include means for outputting position and audio information such as vehicle position data and music as taught by Witkowski et al. for the purpose of communicating to a variety of information when driving a motor vehicle.

6. **Claims 37, 38, 41, and 42** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Chennakeshu et al. (U.S. Patent # 6,542,758 B1)** in view of **Raith (U.S. Patent # 6,493,550 B1)**, and further in view of **Witkowski et al. (U.S. Patent Application Publication # 2002/0197955 A1), as applied to claims 34 and 36 above**, and even further in view of **Levi (U.S. Patent # 5,678,200)**.

Consider **claims 37, 38, 41, and 42**, and **as applied to claims 34 and 36 above**, Chennakeshu et al. in view of Raith and further in view of Witkowski et al. disclose both aforementioned car audio device and car navigation device. Chennakeshu et al. in view of Raith and further in view of Witkowski et al. fail to clearly specify muting the audio or the music when the information transfer section receives an incoming call (claims 37 and 38) and muting the audio reproduced or the music played when an operation for an outgoing call is performed

(claims 41 and 42).

In the same field of endeavor, Levi discloses a mobile communication terminal, comprising an output operation control means (A cellular phone activity detector mounted on a vehicle for controlling different accessory devices, said cellular phone activity detector activated via an antenna by transmitted energy from a mobile communication terminal or cellular phone; *col. 1, lines 7-10; col. 2, lines 43-45; col. 3, lines 62-67; col. 4, lines 12-14 and 31-33*) for supplying an output operation limiting command to said car mounted electronic device via said second radio channel, so as to limit an output of information specific to said car mounted electronic device (Wherein the cellular activity detector uses no direct electrical connection to the mobile communication terminal or cellular phone, instead senses RF transmission from the cellular phone (Audio activity from the cellular phone such as incoming and outgoing calls), subsequently comprising a processor which outputs a control signal to those accessory devices within the cellular phone audio vicinity, as to limit or discriminate audio signals originating from said devices; *col. 1, line 61 thru col. 2, line 3; col. 2, lines 51-63*).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to have the Chennakeshu et al. in view of Raith and further in view of Witkowski et al. mobile communication terminal comprising means for establishing communication with a car mounted electronic device to include output audio control activity as taught by Levi for the purpose of answering a mobile communication terminal and automatically excluding audio activity originating from audio devices attached to a vehicle, except for that originating from the mobile communication terminal, therefore providing safety measures while

driving and answering a call.

7. **Claim 40** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Chennakeshu et al. (U.S. Patent # 6,542,758 B1)** in view of **Raith (U.S. Patent # 6,493,550 B1), as applied to claim 39 above**, and further in view of **Garnault (U.S. Patent # 5,929,769)**.

Consider **claim 40**, and **as applied to claim 39 above**, Chennakeshu et al. in view of Raith disclose the aforementioned car mounted electronic device. Chennakeshu et al. in view of Raith fail to clearly specify wherein the control section outputs a restriction signal to an engine control circuit of a vehicle for restricting startup.

In the same field of endeavor, Garnault discloses a hands-free system for vehicle operation control comprising means for detecting a entrance into a vicinity of the car mounted electronic device or control unit (*item 2*), subsequently after detecting entrance into a vicinity, the transponder or mobile communication terminal (*item 4*) transmits an identification code to the car mounted electronic device, wherein the car mounted electronic device comprise authentication means for recognizing the identification code sent by the mobile communication terminal, and ultimately making a determination for unlocking or opening a vehicle "openable member" such as a vehicle door, therefore restricting engine startup if no identification code is recognized (*col. 1, lines 24- 50; col. 2, lines 37-40 and 53-59; col. 3, lines 28-34; col. 4, lines 30-34 and 55-59; claim 1*).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to have Chennakeshu et al. in view of Raith system for ascertaining and

authenticating presence into a radio communication area to include means for restricting entrance and operation of a motor vehicle as taught by Garnault for the purpose of providing a commodity and security when opening a vehicle door as the driver approaches the vehicle vicinity.

8. **Claims 44-48, 50, 52, 53, and 59** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Chennakeshu et al. (U.S. Patent # 6,542,758 B1)** in view of **Raith (U.S. Patent # 6,493,550 B1)** and further in view of **Levi (U.S. Patent # 5,678,200)**.

Consider **claims 44 and 46**, Chennakeshu et al. disclose a mobile communication terminal (A mobile communication terminal such as a base unit or hand-held radiotelephone; *col. 3, line 66 thru col. 4, line 1; col. 2, lines 47-48*) connectable to a car mounted electronic device (A car mounted electronic device such as a control unit typically mounted on a vehicle, wherein interface modules provide communication between the mobile communication terminal and the car mounted electronic device; *col. 2, lines 30-31; col. 4, lines 60-62; Fig. 1; Fig. 2, item 32; Fig. 3, item 54*), the mobile communication terminal comprising:

a first interface for making radio communication with a mobile communication network (Wherein the mobile communication terminal or base unit comprises a transceiver capable of establishing radio communications with a mobile communication network through a station located outside of the vehicle; *col. 4, lines 1-3; Fig. 2, item 34; col. 6, lines 7-8; Figs. 5-6, item 103*);

a second interface for making radio communication with the car mounted electronic device (Wherein both the base unit and the control unit comprise transceivers/interface modules

for establishing a radio communication link between them; *col. 4, lines 22-23 and 60-64; Fig. 2, item 32; Fig. 3, item 54*);

a connection control section for controlling connection to the car mounted electronic device (Wherein the control unit or car mounted electronic device comprise control logic for handling operations such as audio conversion, wherein said audio conversion comprise elements such as: a microphone for transmitting audio signals to the base unit subsequently conveying them to remote station outside of the vehicle; and a speaker for conveying audio signals received from a remote station outside of the vehicle to the control unit; *col. 4, lines 42-57; Fig. 3, items 48 and 50*); wherein the connection control section starts a connection procedure with the car mounted electronic device by transmitting a signal that includes attribute information (e.g., identification data, type of mobile telephone) of the mobile communication terminal (column 8 line 64 - column 9 line 23) to the car mounted electronic device (control unit) when the car mounted electronic device (control unit) detects the presence of the mobile communication terminal (base unit or hand-held radiotelephone) (*col. 8, lines 54-57*); wherein the car mounted electronic device (control unit) establishes a wireless link between the mobile communication terminal and the car mounted electronic device (*col. 6, lines 31-42*) and consequently sets a hands-free communication mode when control passes to the car mounted electronic device or control unit (*col. 6, lines 55-65*); and

an information transfer control section for transferring an incoming call to the car mounted electronic device via the second interface when the incoming call is received from the mobile communication network via the first interface (this feature reads on the claimed function

of transmitting a control signal to the car mounted electronic device) (Wherein the control unit or car mounted electronic device comprise control logic for handling operations such as audio conversion, wherein said audio conversion comprise elements such as: a microphone for transmitting audio signals to the base unit subsequently conveying them to remote station outside of the vehicle; and a speaker for conveying audio signals received from a remote station outside of the vehicle to the control unit; *col. 4, lines 42-57; Fig. 3, items 48 and 50*).

Chennakeshu et al. further disclose that both the base unit and the control unit comprise transceivers/interface modules for establishing a radio communication link between them, said interface being a Bluetooth interface (*col. 4, lines 60-65; col. 6, lines 18-22*).

However, Chennakeshu et al et al. fail to clearly specify that the car mounted electronic device detects the presence of the mobile communication terminal by transmitting, within a radio area of the car mounted electronic device, a paging signal from the car mounted electronic device.

In the same field of endeavor, Raith clearly discloses that in Bluetooth systems, a fixed portion (such as a car mounted electronic device which is fixed within a car) acts as a master device and continuously transmits INQUIRE messages (paging signals) to determine the presence of mobile devices (mobile communication terminal) within the vicinity (radio area) of the fixed portion, wherein the mobile devices provide a response signal when the INQUIRE message is received (column 7 lines 1-13).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to have Chennakeshu et al. vehicle mounted communication system to

include a paging signal for establishing communications as taught by Raith for the purpose of allowing automatic link establishment between the car mounted electronic device and the mobile communication terminal.

Nonetheless, Chennakeshu et al., as modified by Raith, do not specifically disclose that the reception of the control signal instructs the car mounted electronic device to restrain an output specific to the car mounted electronic device.

In the same field of endeavor, Levi discloses a mobile communication terminal, comprising an output operation control means (A cellular phone activity detector mounted on a vehicle for controlling different accessory devices, said cellular phone activity detector activated via an antenna by transmitted energy from a mobile communication terminal or cellular phone; *col. 1, lines 7-10; col. 2, lines 43-45; col. 3, lines 62-67; col. 4, lines 12-14 and 31-33*) for supplying an output operation limiting command to said car mounted electronic device via said second radio channel, so as to limit an output of information specific to said car mounted electronic device (Wherein the cellular activity detector uses no direct electrical connection to the mobile communication terminal or cellular phone, instead senses RF transmission from the cellular phone (Audio activity from the cellular phone such as incoming and outgoing calls), subsequently comprising a processor which outputs a control signal to those accessory devices within the cellular phone audio vicinity, as to limit or discriminate audio signals originating from said devices; *col. 1, line 61 thru col. 2, line 3; col. 2, lines 51-63*).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to have the Chennakeshu et al., as modified by Raith, mobile

communication terminal comprising means for establishing communication with a car mounted electronic device to include output audio control activity as taught by Levi for the purpose of answering a mobile communication terminal call and automatically excluding audio activity originating from audio devices attached to a vehicle, except for that originating from the mobile communication terminal, therefore providing safety measures while driving and answering a call.

Consider **claim 45**, and **as applied to claim 44 above**, Chennakeshu et al. in view of Raith and further in view of Levi disclose the aforementioned mobile communication terminal. In addition, Chennakeshu et al. disclose wherein the second interface is a Bluetooth circuit (Wherein both the base unit and the control unit comprise transceivers/interface modules for establishing a radio communication link between them, said interface being a Bluetooth interface; *col. 4, lines 60-65; col. 6, lines 18-22*).

Consider **claim 47**, and **as applied to claim 46 above**, Chennakeshu et al. in view of Raith and further in view of Levi disclose the aforementioned mobile communication terminal. In addition, Chennakeshu et al. disclose the wherein the information transfer control section further transfers an outgoing call to the mobile communication network via the first interface when an outgoing call is received from the car mounted electronic device via the second interface (Wherein the control unit or car mounted electronic device comprise a microphone for transmitting audio signals to the base unit through a local-area transceiver conveying them to remote station outside of the vehicle through the base unit transceiver/item 34; *col. 4, lines 42-57; Fig. 2, item 32; Fig. 3, items 48, 50, and 54*).

Consider **claim 48**, and **as applied to claim 44 above**, Chennakeshu et al. in view of

Raith and further in view of Levi disclose the aforementioned mobile communication terminal. In addition, Chennakeshu et al. disclose wherein the connection control section transmits an authentication code to the car mounted electronic device in the connection procedure via the second interface (The control unit or car mounted electronic device receiving the user ID or unique identification number from the base unit or mobile telephone; *col. 8, lines 18-64*).

Consider **claim 50**, Chennakeshu et al. disclose a car mounted electronic device connectable to a mobile communication terminal, the car mounted electronic device comprising:

a radio interface for making radio communication with the mobile communication terminal (Wherein both the base unit and the control unit comprise transceivers/interface modules for establishing a radio communication link between them; *col. 4, lines 22-23 and 60-64; Fig. 2, item 32; Fig. 3, item 54*);

a connection control section for controlling connection to the mobile communication terminal (Wherein the control unit or car mounted electronic device comprise control logic for handling operations such as audio conversion, wherein said audio conversion comprise elements such as: a microphone for transmitting audio signals to the base unit subsequently conveying them to remote station outside of the vehicle; and a speaker for conveying audio signals received from a remote station outside of the vehicle to the control unit; *col. 4, lines 42-57; Fig. 3, items 48 and 50*);

wherein the connection control section of the car mounted electronic device (control unit) detects the presence of the mobile communication terminal (base unit or hand-held radiotelephone) (*col. 8, lines 54-57*), establishes a wireless link between the mobile

communication terminal and the car mounted electronic device (i.e., by providing a response that includes attribute information (e.g., identification data, type of mobile telephone) of the mobile communication terminal (column 8 line 64 - column 9 line 23) from the mobile communication terminal, thereafter creating a two-way wireless link; *col. 6, lines 31-42; Fig. 4, item 68; Fig.6, item 118*), and sets a hands-free communication mode when control passes to the car mounted electronic device or control unit (*col. 6, lines 55-65*); and

an information transfer control section in the mobile communication terminal for transferring an incoming call to the car mounted electronic device via the interface when the incoming call is received from the mobile communication network (this feature reads on the claimed function of transmitting a control signal to the car mounted electronic device) (Wherein the control unit or car mounted electronic device comprise control logic for handling operations such as audio conversion, wherein said audio conversion comprise elements such as: a microphone for transmitting audio signals to the base unit subsequently conveying them to remote station outside of the vehicle; and a speaker for conveying audio signals received from a remote station outside of the vehicle to the control unit; *col. 4, lines 42-57; Fig. 3, items 48 and 50*).

Chennakeshu et al. further disclose that both the base unit and the control unit comprise transceivers/interface modules for establishing a radio communication link between them, said interface being a Bluetooth interface (*col. 4, lines 60-65; col. 6, lines 18-22*).

However, Chennakeshu et al et al. fail to clearly specify that the car mounted electronic device detects the presence of the mobile communication terminal by transmitting, within a radio

area of the car mounted electronic device, a paging signal periodically from the car mounted electronic device.

In the same field of endeavor, Raith clearly discloses that in Bluetooth systems, a fixed portion (such as a car mounted electronic device which is fixed within a car) acts as a master device and continuously, for example every few seconds (periodically), transmits INQUIRE messages (paging signals) to determine the presence of mobile devices (mobile communication terminal) within the vicinity (radio area) of the fixed portion, wherein the mobile devices provide a response signal when the INQUIRE message is received (column 7 lines 1-13).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to have Chennakeshu et al. vehicle mounted communication system to include a paging signal for establishing communications as taught by Raith for the purpose of allowing automatic link establishment between the car mounted electronic device and the mobile communication terminal.

Nonetheless, Chennakeshu et al., as modified by Raith, do not specifically disclose a mute control section configured to restrain an output of information specific to the car mounted electronic device based on the reception of the control signal.

In the same field of endeavor, Levi discloses a mobile communication terminal, comprising an output operation control means (A cellular phone activity detector mounted on a vehicle for controlling different accessory devices, said cellular phone activity detector activated via an antenna by transmitted energy from a mobile communication terminal or cellular phone; *col. 1, lines 7-10; col. 2, lines 43-45; col. 3, lines 62-67; col. 4, lines 12-14 and 31-33*) for

supplying an output operation limiting command to said car mounted electronic device via said second radio channel, so as to limit an output of information specific to said car mounted electronic device (Wherein the cellular activity detector uses no direct electrical connection to the mobile communication terminal or cellular phone, instead senses RF transmission from the cellular phone (Audio activity from the cellular phone such as incoming and outgoing calls), subsequently comprising a processor which outputs a control signal to those accessory devices within the cellular phone audio vicinity, as to limit or discriminate audio signals originating from said devices; *col. 1, line 61 thru col. 2, line 3; col. 2, lines 51-63*).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to have the Chennakeshu et al., as modified by Raith, mobile communication terminal comprising means for establishing communication with a car mounted electronic device to include output audio control activity as taught by Levi for the purpose of answering a mobile communication terminal call and automatically excluding audio activity originating from audio devices attached to a vehicle, except for that originating from the mobile communication terminal, therefore providing safety measures while driving and answering a call.

Consider **claim 52**, and **as applied to claim 50 above**, Chennakeshu et al. in view of Raith and further in view of Levi disclose the aforementioned car mounted electronic device. In addition, Chennakeshu et al. disclose the car mounted electronic device further comprising an information transfer control section for receiving an incoming call (Wherein the control unit or car mounted electronic device comprise control logic for handling operations such as audio conversion, wherein said audio conversion comprise elements such as: a microphone for

transmitting audio signals to the base unit subsequently conveying them to remote station outside of the vehicle; and a speaker for conveying audio signals received from a remote station outside of the vehicle to the control unit; *col. 4, lines 42-57; Fig. 3, items 48 and 50*), and transmitting an outgoing call (Wherein the control unit or car mounted electronic device comprise a microphone for transmitting audio signals to the base unit through a local-area transceiver conveying them to remote station outside of the vehicle through the base unit transceiver/item 34; *col. 4, lines 42-57; Fig. 2, item 32; Fig. 3, items 48, 50, and 54*).

Consider **claim 53**, and **as applied to claim 52 above**, Chennakeshu et al. in view of Raith and further in view of Levi disclose the aforementioned car mounted electronic device. In addition, Chennakeshu et al. disclose the car mounted electronic device further comprising a speaker (A speaker for conveying audio signals received from a remote station outside of the vehicle to the control unit; *col. 4, lines 42-57; Fig. 3, items 48 and 50*) for outputting a speech signal from the mobile communication terminal and a microphone for inputting speech of a user (Wherein the control unit or car mounted electronic device comprise a microphone for transmitting audio signals to the base unit through a local-area transceiver conveying them to remote station outside of the vehicle through the base unit transceiver/item 34; *col. 4, lines 42-57; Fig. 2, item 32; Fig. 3, items 48, 50, and 54*).

Consider **claim 59**, and **as applied to claim 50 above**, Chennakeshu et al. in view of Raith and further in view of Levi disclose the aforementioned car mounted electronic device. In addition, Chennakeshu et al. disclose wherein the control section receives an authentication code from the mobile communication terminal via the radio interface and rejects the connection if the

authentication code is not registered in the car mounted electronic device (The control unit or car mounted electronic device receiving the user ID or unique identification number from the base unit or mobile telephone, and denying access if the identification code is not matched; *col. 8, lines 18-64*).

9. **Claims 49 and 51** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Chennakeshu et al. (U.S. Patent # 6,542,758 B1)** in view of **Raith (U.S. Patent # 6,493,550 B1)** and further in view of **Levi (U.S. Patent # 5,678,200), as applied to claims 44 and 50 above**, and even further in view of **Chen et al. (U.S. Patent # 5,751,719)**.

Consider **claim 49**, and **as applied to claim 44 above**, Chennakeshu et al. in view of Raith and further in view of Levi disclose the aforementioned mobile communication terminal. Chennakeshu et al. in view of Raith and further in view of Levi fail to clearly specify wherein the connection control section disconnects the connection with the car mounted electronic device and sets the communication mode in its own communication mode if no packet, which is periodically output from the car mounted electronic device for acknowledgement of the connection, is received for a predetermined time period.

In the same field of endeavor, Chen et al. disclose a method and system for controlling data transfer wherein data packets are transmitted periodically, and subsequently after receiving said data packets, an acknowledge is sent periodically. If no data packets are received disconnection or cessation of transmission ultimately occurs (*col. 9, line 51 thru col. 10, line 25*).

Therefore it would have been obvious to one with ordinary skill in the art at the time the

invention was made to have Chennakeshu et al. in view of Raith and further in view of Levi vehicle mounted communication system to monitor a communication session based on packet transmission as taught by Chen et al. for the purpose of avoiding the loss of data or voice through a damaged or non-operative communication link or session.

Consider **claim 51**, and **as applied to claim 50 above**, Chennakeshu et al. in view of Raith and further in view of Levi disclose the aforementioned car mounted electronic device. Chennakeshu et al. in view of Raith and further in view of Levi fail to clearly specify wherein the connection control section periodically transmits a packet, which is used by the mobile communication terminal to acknowledge the existence of the connection, via the radio interface.

In the same field of endeavor, Chen et al. further disclose a method and system for controlling data transfer wherein data packets are transmitted periodically, and subsequently after receiving said data packets, an acknowledge is sent periodically. If no data packets are received disconnection or cessation of transmission ultimately occurs (*col. 9, line 51 thru col. 10, line 25*).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to have Chennakeshu et al. in view of Raith and further in view of Levi vehicle mounted communication system to monitor a communication session based on packet transmission as taught by Chen et al. for the purpose of avoiding the loss of data or voice through a damaged or non-operative communication link or session.

10. **Claims 54-58, 61, and 62** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Chennakeshu et al. (U.S. Patent # 6,542,758 B1)** in view of **Raith (U.S. Patent # 6,493,550**

B1) and further in view of **Levi (U.S. Patent # 5,678,200), as applied to claim 52 above**, and even further in view of **Witkowski et al. (U.S. Patent Application Publication # 2002/0197955 A1)**.

Consider **claims 54, 57, 61, and 62**, and **as applied to claim 52 above**, Chennakeshu et al. in view of Raith and further in view of Levi disclose the aforementioned car mounted electronic device. Chennakeshu et al. in view of Raith and further in view of Levi fail to clearly specify wherein the car mounted electronic device is a car audio device having a music playing function and a music is outputted by using the speaker.

In the same field of endeavor, Witkowski et al. disclose a system for communicating information between two or more wireless communication devices, wherein a vehicle comprises an audio system for outputting audio information transmitted from an electronic communication device such as a cellular phone, a CD player or any other portable electronic equipment (*Page 4, Paragraphs 42-45*).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to have Chennakeshu et al. in view of Raith and further in view of Levi mobile communication terminal comprising means for establishing communication with a car mounted electronic device to include means for outputting audio information such as music as taught by Witkowski et al. for the purpose of communicating to a variety of portable communication devices when driving a motor vehicle.

Consider **claims 55, 56, and 58**, and **as applied to claim 52 above**, Chennakeshu et al. in view of Raith disclose the aforementioned car mounted electronic device. Chennakeshu et al. in

view of Raith fail to clearly specify wherein the car mounted electronic device is a car navigation device having a measuring function for measuring a vehicle position by using a GPS and a display for displaying map information (claim 55), wherein the car navigation device further comprises an audio reproduction section for reproducing an audio signal reproduced by the audio reproducing section outputted by using the speaker (claim 56).

In the same field of endeavor, Witkowski et al. disclose wherein the car mounted electronic device is a car navigation device having a measuring function for measuring a vehicle position by using a GPS and a display for displaying map information (A mobile communication terminal such as a cellular phone, and a car navigation device such as a GPS system device on-board a vehicle, wherein the cellular phone transmits information data over an RF wireless link to the on-board vehicle device, subsequently displaying said information on the vehicle's display; *Pages 7-8, Paragraph 73*), wherein the car navigation device further comprises an audio reproduction section for reproducing an audio signal reproduced by the audio reproducing section outputted by using the speaker (Pages 7-8, Paragraph 73).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to have Chennakeshu et al. in view of Raith mobile communication terminal comprising means for establishing communication with a car mounted electronic device to include means for outputting position and audio information such as vehicle position data and music as taught by Witkowski et al. for the purpose of communicating to a variety of information when driving a motor vehicle.

11. **Claim 60** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Chennakeshu et al. (U.S. Patent # 6,542,758 B1)** in view of **Raith (U.S. Patent # 6,493,550 B1)** and further in view of **Levi (U.S. Patent # 5,678,200), as applied to claim 59 above**, and even further in view of **Garnault (U.S. Patent # 5,929,769)**.

Consider **claim 60**, and **as applied to claim 59 above**, Chennakeshu et al. in view of Raith and further in view of Levi disclose the aforementioned car mounted electronic device. Chennakeshu et al. in view of Raith and further in view of Levi fail to clearly specify wherein the control section outputs a restriction signal to an engine control circuit of a vehicle for restricting startup.

In the same field of endeavor, Garnault discloses a hands-free system for vehicle operation control comprising means for detecting a entrance into a vicinity of the car mounted electronic device or control unit (*item 2*), subsequently after detecting entrance into a vicinity, the transponder or mobile communication terminal (*item 4*) transmits an identification code to the car mounted electronic device, wherein the car mounted electronic device comprise authentication means for recognizing the identification code sent by the mobile communication terminal, and ultimately making a determination for unlocking or opening a vehicle "openable member" such as a vehicle door, therefore restricting engine startup if no identification code is recognized (*col. 1, lines 24- 50; col. 2, lines 37-40 and 53-59; col. 3, lines 28-34; col. 4, lines 30-34 and 55-59; claim 1*).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to have Chennakeshu et al. in view of Raith and further in view of Levi

system for ascertaining and authenticating presence into a radio communication area to include means for restricting entrance and operation of a motor vehicle as taught by Garnault for the purpose of providing a commodity and security when opening a vehicle door as the driver approaches the vehicle vicinity.

12. **Claims 24-28, 30, 32, 33, 39, and 43** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Chennakeshu et al. (U.S. Patent # 6,542,758 B1)** in view of **Lappe (U.S. Patent Application Publication # 2001/0021640 A1)**.

Consider **claim 24**, Chennakeshu et al. disclose a mobile communication terminal (A mobile communication terminal such as a base unit or hand-held radiotelephone; *col. 3, line 66 thru col. 4, line 1; col. 2, lines 47-48*) connectable to a car mounted electronic device (A car mounted electronic device such as a control unit typically mounted on a vehicle, wherein interface modules provide communication between the mobile communication terminal and the car mounted electronic device; *col. 2, lines 30-31; col. 4, lines 60-62; Fig. 1; Fig. 2, item 32; Fig. 3, item 54*), the mobile communication terminal comprising:

a first interface for making radio communication with a mobile communication network (Wherein the mobile communication terminal or base unit comprises a transceiver capable of establishing radio communications with a mobile communication network through a station located outside of the vehicle; *col. 4, lines 1-3; Fig. 2, item 34; col. 6, lines 7-8; Figs. 5-6, item 103*);

a second interface for making radio communication with the car mounted electronic

device (Wherein both the base unit and the control unit comprise transceivers/interface modules for establishing a radio communication link between them; *col. 4, lines 22-23 and 60-64; Fig. 2, item 32; Fig. 3, item 54*);

a connection control section for controlling connection to the car mounted electronic device (Wherein the control unit or car mounted electronic device comprise control logic for handling operations such as audio conversion, wherein said audio conversion comprise elements such as: a microphone for transmitting audio signals to the base unit subsequently conveying them to remote station outside of the vehicle; and a speaker for conveying audio signals received from a remote station outside of the vehicle to the control unit; *col. 4, lines 42-57; Fig. 3, items 48 and 50*);

wherein the connection control section starts a connection procedure with the car mounted electronic device by transmitting a signal that includes attribute information (e.g., identification data, type of mobile telephone) of the mobile communication terminal (column 8 line 64 - column 9 line 23) to the car mounted electronic device (control unit) when the car mounted electronic device (control unit) detects the presence of the mobile communication terminal (base unit or hand-held radiotelephone) (*col. 8, lines 54-57*); wherein the car mounted electronic device (control unit) establishes a wireless link between the mobile communication terminal and the car mounted electronic device (*col. 6, lines 31-42*) and consequently sets a hands-free communication mode when control passes to the car mounted electronic device or control unit (*col. 6, lines 55-65*).

Chennakeshu et al. further disclose that both the base unit and the control unit comprise

transceivers/interface modules for establishing a radio communication link between them, said interface being a Bluetooth interface (*col. 4, lines 60-65; col. 6, lines 18-22*).

However, Chennakeshu et al et al. fail to clearly specify that the car mounted electronic device detects the presence of the mobile communication terminal by transmitting, within a radio area of the car mounted electronic device, a paging signal from the car mounted electronic device.

In the same field of endeavor, Lappe clearly shows and discloses a system for communicating between a car mounted electronic device 15 and a mobile communication terminal 12 in which a paging signal transmitted periodically (inherent since operation is in accordance with the Bluetooth standard) by the car mounted electronic device 15 is used to determine the presence of the mobile communication terminal 12 within the vicinity of the device 15, wherein the mobile communication terminal 15 provide a response signal when the paging signal is received (abstract, figure 1, and paragraphs 0006-0009 and 0015-0018).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to have Chennakeshu et al. vehicle mounted communication system to include a paging signal for establishing communications as taught by Lappe for the purpose of allowing automatic link establishment between the car mounted electronic device and the mobile communication terminal.

Consider **claim 25**, and **as applied to claim 24 above**, Chennakeshu et al. in view of Lappe disclose the aforementioned mobile communication terminal. In addition, Chennakeshu et al. disclose wherein the second interface is a Bluetooth circuit (Wherein both the base unit and

the control unit comprise transceivers/interface modules for establishing a radio communication link between them, said interface being a Bluetooth interface; *col. 4, lines 60-65; col. 6, lines 18-22*).

Consider **claim 26**, and **as applied to claim 24 above**, Chennakeshu et al. in view of Lappe disclose the aforementioned mobile communication terminal. In addition, Chennakeshu et al. disclose the mobile communication terminal further comprising an information transfer control section for transferring an incoming call to the car mounted electronic device via the second interface when the incoming call is received from the mobile communication network via the first interface (Wherein the control unit or car mounted electronic device comprise control logic for handling operations such as audio conversion, wherein said audio conversion comprise elements such as: a microphone for transmitting audio signals to the base unit subsequently conveying them to remote station outside of the vehicle; and a speaker for conveying audio signals received from a remote station outside of the vehicle to the control unit; *col. 4, lines 42-57; Fig. 3, items 48 and 50*).

Consider **claim 27**, and **as applied to claim 26 above**, Chennakeshu et al. in view of Lappe disclose the aforementioned mobile communication terminal. In addition, Chennakeshu et al. disclose the wherein the information transfer control section further transfers an outgoing call to the mobile communication network via the first interface when an outgoing call is received from the car mounted electronic device via the second interface (Wherein the control unit or car mounted electronic device comprise a microphone for transmitting audio signals to the base unit through a local-area transceiver conveying them to remote station outside of the vehicle through

the base unit transceiver/item 34; *col. 4, lines 42-57; Fig. 2, item 32; Fig. 3, items 48, 50, and 54*).

Consider **claim 28**, and **as applied to claim 24 above**, Chennakeshu et al. in view of Lappe disclose the aforementioned mobile communication terminal. In addition, Chennakeshu et al. disclose wherein the connection control section transmits an authentication code to the car mounted electronic device in the connection procedure via the second interface (The control unit or car mounted electronic device receiving the user ID or unique identification number from the base unit or mobile telephone; *col. 8, lines 18-64*).

Consider **claim 30**, Chennakeshu et al. disclose a car mounted electronic device connectable to a mobile communication terminal, the car mounted electronic device comprising:

a radio interface for making radio communication with the mobile communication terminal (Wherein both the base unit and the control unit comprise transceivers/interface modules for establishing a radio communication link between them; *col. 4, lines 22-23 and 60-64; Fig. 2, item 32; Fig. 3, item 54*); and

a connection control section for controlling connection to the mobile communication terminal (Wherein the control unit or car mounted electronic device comprise control logic for handling operations such as audio conversion, wherein said audio conversion comprise elements such as: a microphone for transmitting audio signals to the base unit subsequently conveying them to remote station outside of the vehicle; and a speaker for conveying audio signals received from a remote station outside of the vehicle to the control unit; *col. 4, lines 42-57; Fig. 3, items 48 and 50*);

wherein the connection control section of the car mounted electronic device (control unit) detects the presence of the mobile communication terminal (base unit or hand-held radiotelephone) (*col. 8, lines 54-57*), establishes a wireless link between the mobile communication terminal and the car mounted electronic device (i.e., by providing a response that includes attribute information (e.g., identification data, type of mobile telephone) of the mobile communication terminal (column 8 line 64 - column 9 line 23) from the mobile communication terminal, thereafter creating a two-way wireless link; *col. 6, lines 31-42; Fig. 4, item 68; Fig.6, item 118*), and sets a hands-free communication mode when control passes to the car mounted electronic device or control unit (*col. 6, lines 55-65*).

Chennakeshu et al. further disclose that both the base unit and the control unit comprise transceivers/interface modules for establishing a radio communication link between them, said interface being a Bluetooth interface (*col. 4, lines 60-65; col. 6, lines 18-22*).

However, Chennakeshu et al et al. fail to clearly specify that the car mounted electronic device detects the presence of the mobile communication terminal by transmitting, within a radio area of the car mounted electronic device, a paging signal periodically from the car mounted electronic device.

In the same field of endeavor, Lappe clearly shows and discloses a system for communicating between a car mounted electronic device 15 and a mobile communication terminal 12 in which a paging signal transmitted periodically (inherent since operation is in accordance with the Bluetooth standard) by the car mounted electronic device 15 is used to determine the presence of the mobile communication terminal 12 within the vicinity of the

device 15, wherein the mobile communication terminal 15 provide a response signal when the paging signal is received (abstract, figure 1, and paragraphs 0006-0009 and 0015-0018).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to have Chennakeshu et al. vehicle mounted communication system to include a paging signal for establishing communications as taught by Lappe for the purpose of allowing automatic link establishment between the car mounted electronic device and the mobile communication terminal.

Consider **claim 32**, and **as applied to claim 30 above**, Chennakeshu et al. in view of Lappe disclose the aforementioned car mounted electronic device. In addition, Chennakeshu et al. disclose the car mounted electronic device further comprising an information transfer control section for receiving an incoming call (Wherein the control unit or car mounted electronic device comprise control logic for handling operations such as audio conversion, wherein said audio conversion comprise elements such as: a microphone for transmitting audio signals to the base unit subsequently conveying them to remote station outside of the vehicle; and a speaker for conveying audio signals received from a remote station outside of the vehicle to the control unit; *col. 4, lines 42-57; Fig. 3, items 48 and 50*), and transmitting an outgoing call (Wherein the control unit or car mounted electronic device comprise a microphone for transmitting audio signals to the base unit through a local-area transceiver conveying them to remote station outside of the vehicle through the base unit transceiver/item 34; *col. 4, lines 42-57; Fig. 2, item 32; Fig. 3, items 48, 50, and 54*).

Consider **claim 33**, and **as applied to claim 32 above**, Chennakeshu et al. in view of

Lappe disclose the aforementioned car mounted electronic device. In addition, Chennakeshu et al. disclose the car mounted electronic device further comprising a speaker (A speaker for conveying audio signals received from a remote station outside of the vehicle to the control unit; *col. 4, lines 42-57; Fig. 3, items 48 and 50*) for outputting a speech signal from the mobile communication terminal and a microphone for inputting speech of a user (Wherein the control unit or car mounted electronic device comprise a microphone for transmitting audio signals to the base unit through a local-area transceiver conveying them to remote station outside of the vehicle through the base unit transceiver/item 34; *col. 4, lines 42-57; Fig. 2, item 32; Fig. 3, items 48, 50, and 54*).

Consider **claim 39**, and **as applied to claim 30 above**, Chennakeshu et al. in view of Lappe disclose the aforementioned car mounted electronic device. In addition, Chennakeshu et al. disclose wherein the control section receives an authentication code from the mobile communication terminal via the radio interface and rejects the connection if the authentication code is not registered in the car mounted electronic device (The control unit or car mounted electronic device receiving the user ID or unique identification number from the base unit or mobile telephone, and denying access if the identification code is not matched; *col. 8, lines 18-64*).

Consider **claim 43**, Chennakeshu et al. disclose a system comprising:

a mobile communication terminal (A car mounted electronic device such as a control unit typically mounted on a vehicle, wherein interface modules provide communication between the mobile communication terminal and the car mounted electronic device; *col. 2, lines 30-31; col.*

4, lines 60-62; Fig. 1; Fig. 2, item 32; Fig. 3, item 54), and

a car mounted electronic device connectable to the mobile communication terminal (A mobile communication terminal such as a base unit or hand-held radiotelephone; *col. 3, line 66 thru col. 4, line 1; col. 2, lines 47-48*),

the mobile communication terminal including:

a first interface for making radio communication with a mobile communication network (Wherein the mobile communication terminal or base unit comprises a transceiver capable of establishing radio communications with a mobile communication network through a station located outside of the vehicle; *col. 4, lines 1-3; Fig. 2, item 34; col. 6, lines 7-8; Figs. 5-6, item 103*);

a second interface for making radio communication with the car mounted electronic device (Wherein both the base unit and the control unit comprise transceivers/interface modules for establishing a radio communication link between them; *col. 4, lines 22-23 and 60-64; Fig. 2, item 32; Fig. 3, item 54*);

a first connection control section for controlling connection to the car mounted electronic device (Wherein the control unit or car mounted electronic device comprise control logic for handling operations such as audio conversion, wherein said audio conversion comprise elements such as: a microphone for transmitting audio signals to the base unit subsequently conveying them to remote station outside of the vehicle; and a speaker for conveying audio signals received from a remote station outside of the vehicle to the control unit; *col. 4, lines 42-57; Fig. 3, items 48 and 50*);

the car mounted electronic device including:

a third interface for making radio communication with the mobile communication terminal (Wherein both the base unit and the control unit comprise transceivers/interface modules for establishing a radio communication link between them; *col. 4, lines 22-23 and 60-64; Fig. 2, item 32; Fig. 3, item 54*); and

a second connection control section for controlling connection to the mobile communication terminal (Wherein the control unit or car mounted electronic device comprise control logic for handling operations such as audio conversion, wherein said audio conversion comprise elements such as: a microphone for transmitting audio signals to the base unit subsequently conveying them to remote station outside of the vehicle; and a speaker for conveying audio signals received from a remote station outside of the vehicle to the control unit; *col. 4, lines 42-57; Fig. 3, items 48 and 50*);

wherein the first connection control section starts a connection procedure with the car mounted electronic device by transmitting a signal that includes attribute information (e.g., identification data, type of mobile telephone) of the mobile communication terminal (column 8 line 64 - column 9 line 23) to the car mounted electronic device (control unit) when the car mounted electronic device (control unit) detects the presence of the mobile communication terminal (base unit or hand-held radiotelephone) (*col. 8, lines 54-57*); wherein the car mounted electronic device (control unit) establishes a wireless link between the mobile communication terminal and the car mounted electronic device (*col. 6, lines 31-42*) and consequently sets a hands-free communication mode when control passes to the car mounted electronic device or

control unit (*col. 6, lines 55-65*), and

the second connection control section of the car mounted electronic device (control unit) detects the presence of the mobile communication terminal (base unit or hand-held radiotelephone) (*col. 8, lines 54-57*), establishes a wireless link between the mobile communication terminal and the car mounted electronic device (i.e., by providing a response that includes attribute information (e.g., identification data, type of mobile telephone) of the mobile communication terminal (column 8 line 64 - column 9 line 23) from the mobile communication terminal, thereafter creating a two-way wireless link; *col. 6, lines 31-42; Fig. 4, item 68; Fig.6, item 118*), and sets a hands-free communication mode when control passes to the car mounted electronic device or control unit (*col. 6, lines 55-65*).

Chennakeshu et al. further disclose that both the base unit and the control unit comprise transceivers/interface modules for establishing a radio communication link between them, said interface being a Bluetooth interface (*col. 4, lines 60-65; col. 6, lines 18-22*).

However, Chennakeshu et al et al. fail to clearly specify that the car mounted electronic device detects the presence of the mobile communication terminal by transmitting, within a radio area of the car mounted electronic device, a paging signal periodically from the car mounted electronic device.

In the same field of endeavor, Lappe clearly shows and discloses a system for communicating between a car mounted electronic device 15 and a mobile communication terminal 12 in which a paging signal transmitted periodically (inherent since operation is in accordance with the Bluetooth standard) by the car mounted electronic device 15 is used to

determine the presence of the mobile communication terminal 12 within the vicinity of the device 15, wherein the mobile communication terminal 15 provide a response signal when the paging signal is received (abstract, figure 1, and paragraphs 0006-0009 and 0015-0018).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to have Chennakeshu et al. vehicle mounted communication system to include a paging signal for establishing communications as taught by Lappe for the purpose of allowing automatic link establishment between the car mounted electronic device and the mobile communication terminal.

Response to Arguments

13. Applicant's arguments with respect to **claims 44-62** have been considered but are moot in view of the new ground(s) of rejection.

14. Applicant's arguments filed June 14, 2005 have been fully considered but they are not persuasive.

Regarding **claims 24, 30, and 43**, in response to Applicant's arguments, on page 16 and 17 of the remarks, against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In the instant application, Applicant argues that Chennakeshu et

al. transmit signals from the mobile communication terminal while claims 24, 30, and 43 recites that the car mounted electronic device is the one transmitting signals. The Examiner respectfully disagrees with Applicant's argument because this feature is met through the teachings of Raith (see the rejection) when considered as a whole with the teachings of Chennakeshu et al.. Therefore, this argument is not persuasive. Additionally, Applicant also argues that Raith teaches away from the instant application claims because the inquiry signals disclosed by Raith are incoming call signals. The Examiner strongly disagrees with Applicant's argument because Raith has been used in the rejection only evidence that in Bluetooth systems, a fixed portion (such as the claimed car mounted electronic device which is fixed within a car) acts as a master device and continuously transmits INQUIRE messages (paging signals) to determine the presence of mobile devices (mobile communication terminal) within the vicinity (radio area) of the fixed portion, wherein the mobile devices provide a response signal when the INQUIRE message is received (column 7 lines 1-13). Nowhere in the citation relied upon by the Examiner in Raith it is disclosed that the inquiry signals are incoming call signals as Applicant argues. Consequently, this argument is also not persuasive.

Finally, Applicant also argues, on page 18 of the remarks, that no portion of Chennakeshu et al., Raith, or Lappe is cited in the outstanding Office Action as evidence or motivation to combine the references in the proposed combinations.

The Examiner respectfully disagrees with Applicant's argument because an express written motivation to combine is not required to appear in the prior art references. See *Ruiz v. A.B. Chance Co.*, 357 F.3d 1270, 69 USPQ2d 1686 (Fed. Cir. 2004), where the court rejected the

notion that "an express written motivation to combine must appear in prior art references...." *Id.* at 1276, 69 USPQ2d at 1690.

15. Applicant's arguments, in reference to **claims 29, 31, 34-38, and 40-42**, fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Conclusion

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office Action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

17. Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed to**:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

18. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Rafael Perez-Gutierrez whose telephone number is (571) 272-7915. The Examiner can normally be reached on Monday-Thursday from 6:30am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Marsha D. Banks-Harold can be reached on (571) 272-7905. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Rafael Perez-Gutierrez
R.P.G./rpg

RAFAEL PEREZ-GUTIERREZ
PRIMARY EXAMINER

October 15, 2005